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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,687	02/25/2002	Alexander E. Andreev	01-956	2908
24319	7590	07/16/2004	EXAMINER	
LSI LOGIC CORPORATION 1621 BARBER LANE MS: D-106 LEGAL MILPITAS, CA 95035			ROBINSON, GRETA LEE	
			ART UNIT	PAPER NUMBER
			2177	

DATE MAILED: 07/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/082,687

Applicant(s)

ANDREEV ET AL.

Examiner

Greta L. Robinson

Art Unit

2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-32 are pending in the present application.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colbrook et al. Algorithms for Searching Trees on Message Passing Architectures in view of Dixon et al. US Patent 4,464,718.

Regarding claim 1, Colbrook et al. teaches a system suitable for providing a search [note: abstract ], comprising:

a central controller suitable for implementing search and edit operations [note: "*a series of search, insertion and deletion operations executing in parallel*" page 97]; and

at least one search engine communicatively coupled to the central controller [note: page 102 The Simulator; page 103 Implementation; and page 106 Design Alternatives];

wherein the central controller performs parallel execution of a search operation and an edit operation ... [note: "*a series of search, insertion and deletion operations executing in parallel*" page 97; also note network chip page 102].

Although Colbrook et al. teaches the invention substantially as cited above, they do not explicitly disclose a search engine. Colbrook et al. teaches concurrent search tree algorithms that manage contention and control concurrency. Dixon et al. teaches a search engine [note: search engine (controller 16) figure 1; abstract]. It would have been obvious to one of ordinary skill at the time of the invention to implement a search engine in order to make operative the programming features of Colbrook et al..

4. Regarding claims 2-13, wherein the central controller and at least one engine are coupled via a search connection, an edit connection, and a cache connection ... search engine includes priority controller ... manages access to memory ... [note: Colbrook et al. figures 1-7; Dixon et al. figure 1 and col. 4 lines 32-68].

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5. Regarding claims 14-20, edit and search modules, note Colbrook et al. teaches implementation of various design implementations for the software search algorithms see page 97, 98, 102 and 106-10.

6. The limitations of claims 21-32 have been addressed above in claims 1-13 except for the following: search engines arranged in 0 through k levels [note: search tree hierarchy for search algorithm page 97-101].

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Andreev et al. US Patent 6,564,211 B1

Beardsley et al. US Patent 5,721,898

Lee et al. US Patent 6,678,678 B2

Uga et al. US Patent 6,718,326 B2

Liao US Patent 6,633,865 B1

Mansor et al. FPGA-Based Internet protocol Version 6 Router

Muramatsu et al., *Image Processing LSI "ISP-IV" Based on Local Parallel Architecture and Its Applications*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greta L. Robinson whose telephone number is (703) 308-7565. The examiner can normally be reached on Mon.-Fri. 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



GRETA ROBINSON  
PRIMARY EXAMINER

Greta Robinson  
Primary Examiner  
July 15, 2004